



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**L14-2212 SME (S/N T2P00700)**  
 Component  
**Starboard Main Engine**  
 Fluid  
**PETRO CANADA DURON HP 15W40 (70 LTR)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0821969</b>	WC0729387	WC0729405
Sample Date		Client Info		<b>14 Jun 2024</b>	15 May 2023	06 Apr 2023
Machine Age	hrs	Client Info		<b>23531</b>	22978	22478
Oil Age	hrs	Client Info		<b>500</b>	500	538
Filter Age	hrs	Client Info		<b>500</b>	500	538
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>75	<b>17</b>	17	21
Chromium	ppm	ASTM D5185(m)	>8	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185(m)	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185(m)	>3	<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>15	<b>&lt;1</b>	<1	1
Lead	ppm	ASTM D5185(m)	>18	<b>2</b>	3	4
Copper	ppm	ASTM D5185(m)	>80	<b>4</b>	5	12
Tin	ppm	ASTM D5185(m)	>14	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## CONTAMINATION

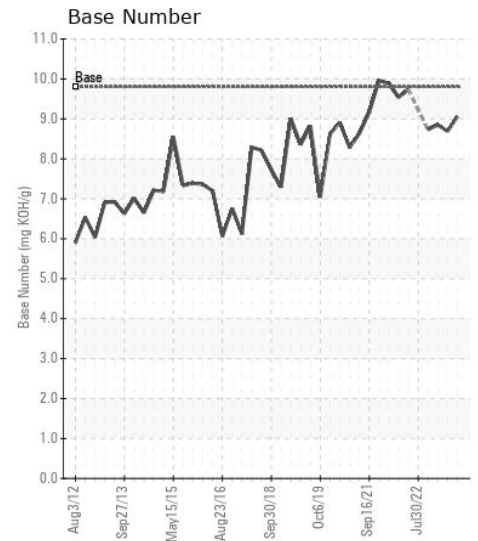
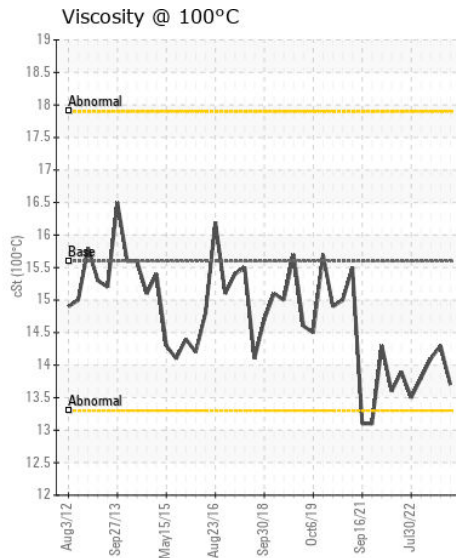
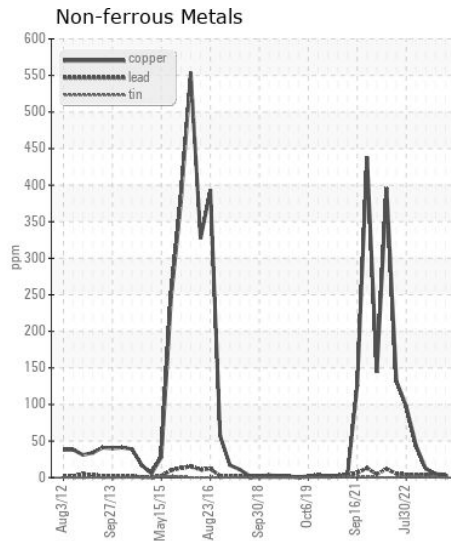
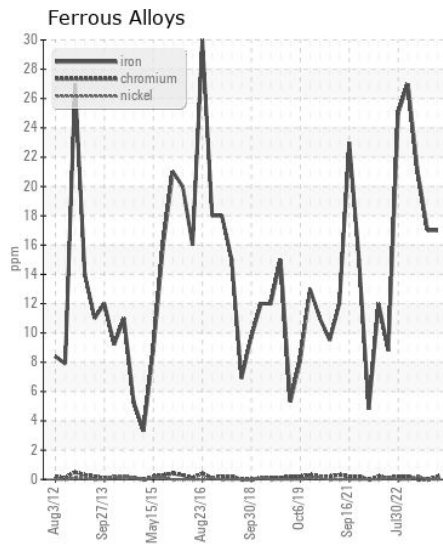
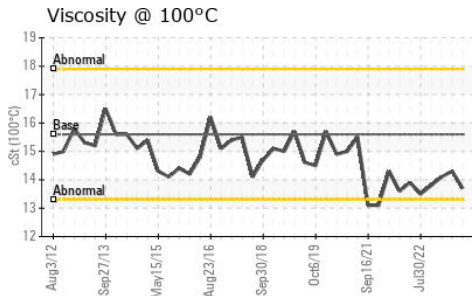
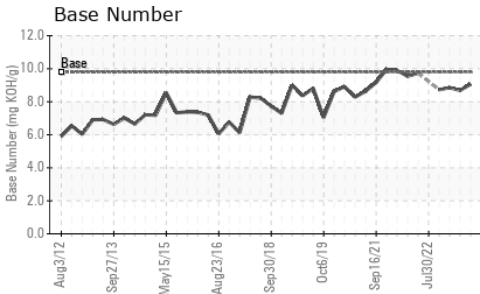
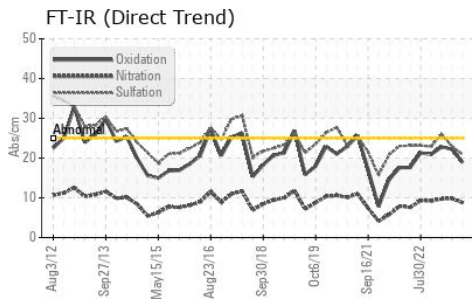
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>20	<b>1</b>	2	2
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	0	0
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	ASTM D7844*		<b>0.1</b>	0.1	0
Nitration	Abs/cm	ASTM D7624*	>20	<b>8.8</b>	9.8	9.7
Sulfation	Abs/.1mm	ASTM D7415*	>30	<b>20.9</b>	22.9	26.1
Emulsified Water	scalar	Visual*	>0.1	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)	>75	<b>2</b>	2	2
Boron	ppm	ASTM D5185(m)	0	<b>2</b>	2	1
Barium	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	60	<b>60</b>	65	64
Manganese	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185(m)	1010	<b>985</b>	1080	1077
Calcium	ppm	ASTM D5185(m)	1070	<b>1073</b>	1198	1197
Phosphorus	ppm	ASTM D5185(m)	1150	<b>939</b>	1101	1099
Zinc	ppm	ASTM D5185(m)	1270	<b>1186</b>	1261	1288
Sulfur	ppm	ASTM D5185(m)	2060	<b>2404</b>	2570	2560
Oxidation	Abs/.1mm	ASTM D7414*	>25	<b>18.9</b>	22.2	22.8
Base Number (BN)	mg KOH/g	ASTM D2896*	9.8	<b>9.06</b>	8.69	8.85
Visc @ 100°C	cSt	ASTM D7279(m)	15.6	<b>13.7</b>	14.3	14.1



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0821969  
**Lab Number** : 02645120  
**Unique Number** : 5802659  
**Test Package** : MAR 2

**Received** : 03 Jul 2024  
**Tested** : 03 Jul 2024  
**Diagnosed** : 03 Jul 2024 - Wes Davis

**CANADIAN COAST GUARD**  
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To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.